

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**LISTING OF THE CLAIMS:**

1-14. (Canceled).

15. (Currently Amended) A method for adjusting a characteristic curve of an exposure sensitivity of at least one pixel of at least one image sensor, in a motor vehicle, the characteristic curve being formed in segments of functions, including of linear functions, the method comprising:

imaging a scene using the at least one image sensor; and

adjusting the characteristic curve of the exposure sensitivity as a function of image signals from at least a part of the scene registered by the at least one image sensor so that a frequency of the gray values, which is a number of pixels within an image that have the gray values based on a total number of pixels of at least a part of the histogram of image signals from the at least one image sensor of the at least one part of the registered scene, is approximately constant, and so that the gray value density, which is a sum of frequencies of the gray values in an interval of gray values in reference to the interval of at least a part of the histogram of image signals from the at least one image sensor of the at least one part of the registered scene, is approximately constant, and wherein the segments of linear functions are individually adjusted for adjusting the at least one pixel of the image sensor.

16. (Previously Presented) The method of claim 15, wherein the characteristic curve of the exposure sensitivity is adjusted as a function of image signals from at least a part of the scene registered by the at least one image sensor, so that, when a gray value wedge having two segments with different gradients of the gray values is registered as the scene, the at least one image sensor generates an image nearly free of apparent contours.

17. (Previously Presented) The method of claim 15, wherein the characteristic curve of the exposure sensitivity is adjusted as a function of a determined optimal characteristic curve of

the exposure sensitivity, including a determined characteristic curve of the exposure sensitivity which is optimal according to information theory, at least one of the optimal characteristic curve of the exposure sensitivity and the characteristic curve of the exposure sensitivity which is optimal according to information theory being determined as a function of image signals from the at least one image sensor.

18. (Previously Presented) The method of claim 17, further comprising:

determining the optimal characteristic curve of the exposure sensitivity as a function of a histogram of the gray values of at least one image and/or of at least one image detail; and

approximating the characteristic curve of the exposure sensitivity to the determined optimal characteristic curve of the exposure sensitivity, including approximation of the characteristic curve of the exposure sensitivity to the determined optional characteristic curve of the exposure sensitivity through at least one numerical approximation method and/or at least one segmenting method.

19. (Previously Presented) The method of claim 15, wherein at least one of the gain, the offset, the integration time and at least one additional parameter for adjusting the characteristic curve of the exposure sensitivity of the at least one pixel of the at least one image sensor is adjusted, the at least one additional parameter for adjusting the characteristic curve of the exposure sensitivity being at least one of (i) at least one parameter for adjusting the number of segments of the characteristic curve of the exposure sensitivity, (ii) at least one parameter for adjusting the position of the segments of the characteristic curve of the exposure sensitivity, (iii) at least one parameter for adjusting the size of the segments of the characteristic curve of the exposure sensitivity, and (iv) at least one parameter for adjusting the at least one function.

20. (Canceled).

21. (Previously Presented) The method of claim 15, wherein the characteristic curve of the exposure sensitivity of the at least one pixel of the at least one image sensor is adjusted as a function of image signals from at least two image sensors, including at least one stereo camera.

22. (Currently Amended) A processing unit for generating at least one adjustment signal for adjusting the characteristic curve of the exposure sensitivity of at least one pixel of at least one image sensor, including in a motor vehicle, the characteristic curve being formed in segments of functions, including of linear functions, comprising:

an arrangement to generate the at least one adjustment signal to adjust the characteristic curve of the exposure sensitivity as a function of image signals from at least a part of the scene registered by the at least one image sensor so that a frequency of the gray values, which is a number of pixels within an image that have the gray values based on a total number of pixels of at least a part of the histogram of image signals from the at least one image sensor of the at least one part of the registered scene, is approximately constant, and so that a gray value density, which is a sum of frequencies of the gray values in an interval of gray values in reference to the interval of at least a part of the histogram of image signals from the at least one part of the registered scene, is approximately constant, and wherein the segments of linear functions are individually adjusted for adjusting the at least one pixel of the image sensor.

23. (Previously Presented) The processing unit of claim 22, wherein the processing unit generates the at least one adjustment signal to adjust the characteristic curve of the exposure sensitivity as a function of image signals from at least a part of the scene registered by the at least one image sensor, so that, when a gray value wedge having two segments with different gradients of the gray values is registered as the scene, the at least one image sensor generates an image nearly free of apparent contours.

24. (Previously Presented) The processing unit of claim 22, wherein the processing unit adjusts the characteristic curve of the exposure sensitivity as a function of a determined optimal characteristic curve of the exposure sensitivity, including a determined characteristic curve of the exposure sensitivity which is optimal according to information theory, the processing unit determining at least one of the optimal characteristic curve of the exposure sensitivity and the characteristic curve of the exposure sensitivity which is optimal according to information theory as a function of image signals from the at least one image sensor.

25. (Previously Presented) The processing unit of claim 24, wherein the processing unit performs at least one of the following:

determines the optimal characteristic curve of the exposure sensitivity as a function of a histogram of the gray values of at least one image and/or of at least one image detail; and

approximates the characteristic curve of the exposure sensitivity to the determined optimal characteristic curve of the exposure sensitivity, including that the processing unit approximates the characteristic curve of the exposure sensitivity to the determined optimal characteristic curve of the exposure sensitivity by at least one of numerical approximation methods and segmenting methods.

26. (Previously Presented) The processing unit of claim 22, wherein the processing unit generates at least one adjustment signal for adjusting at least one of the gain, the offset, the integration time and at least one additional adjustment signal for adjusting the characteristic curve of the exposure sensitivity of the at least one pixel of the at least one image sensor, and wherein the at least one additional adjustment signal for adjusting the characteristic curve of the exposure sensitivity is at least one of (i) at least one adjustment signal for adjusting the number of segments of the characteristic curve of the exposure sensitivity, (ii) at least one adjustment signal for adjusting the position of the segments of the characteristic curve of the exposure sensitivity, (iii) at least one adjustment signal for adjusting the size of the segments of the characteristic curve of the exposure sensitivity, and (iv) at least one adjustment signal for adjusting the at least one function.

27. (Previously Presented) The processing unit of claim 22, wherein the processing unit generates the at least one adjustment signal for adjusting the characteristic curve of the exposure sensitivity of the at least one pixel of the at least one image sensor as a function of image signals from at least two image sensors, including at least one stereo camera.

28. (Currently Amended) A computer readable medium having a computer program executable on a computer, comprising:

a program code arrangement for adjusting a characteristic curve of an exposure sensitivity of at least one pixel of at least one image sensor, in a motor vehicle, the

U.S. Pat. App. Ser. No. 10/542,672  
Attorney Docket No. 10191/3945  
Reply to Office Action of January 5, 2010

characteristic curve being formed in segments of functions, including of linear functions, by performing the following:

adjusting the characteristic curve of the exposure sensitivity as a function of image signals from at least a part of the scene registered by the at least one image sensor so that the following is satisfied: a frequency of the gray values which is the number of pixels within an image that have the gray values based on the total number of pixels of at least a part of the histogram of image signals from the at least one image sensor of the at least one part of the registered scene is approximately constant; and the gray value density which is a sum of frequencies of the gray values in an interval of gray values in reference to the interval of at least a part of the histogram of image signals from the at least one image sensor of the at least one part of the registered scene is approximately constant, and wherein the segments of linear functions are individually adjusted for adjusting the at least one pixel of the image sensor.

29. (Previously Presented) The computer readable medium of claim 28, wherein the characteristic curve of the exposure sensitivity is adjusted as a function of image signals from at least a part of the scene registered by the at least one image sensor, so that, when a gray value wedge having two segments with different gradients of the gray values is registered as the scene, the at least one image sensor generates an image nearly free of apparent contours.

30. (Previously Presented) The computer readable medium of claim 28, wherein the characteristic curve of the exposure sensitivity is adjusted as a function of a determined optimal characteristic curve of the exposure sensitivity, including a determined characteristic curve of the exposure sensitivity which is optimal according to information theory, at least one of the optimal characteristic curve of the exposure sensitivity and the characteristic curve of the exposure sensitivity which is optimal according to information theory being determined as a function of image signals from the at least one image sensor.

31. (Previously Presented) The computer readable medium of claim 30, further comprising:  
determining the optimal characteristic curve of the exposure sensitivity as a function of a histogram of the gray values of at least one image and/or of at least one image detail;  
approximating the characteristic curve of the exposure sensitivity to the determined optimal characteristic curve of the exposure sensitivity, including approximation of the

U.S. Pat. App. Ser. No. 10/542,672  
Attorney Docket No. 10191/3945  
Reply to Office Action of January 5, 2010

characteristic curve of the exposure sensitivity to the determined optional characteristic curve of the exposure sensitivity through at least one numerical approximation method and/or at least one segmenting method.

32. (Previously Presented) The computer readable medium of claim 28, wherein at least one of the gain, the offset, the integration time and at least one additional parameter for adjusting the characteristic curve of the exposure sensitivity of the at least one pixel of the at least one image sensor is adjusted, the at least one additional parameter for adjusting the characteristic curve of the exposure sensitivity being at least one of (i) at least one parameter for adjusting the number of segments of the characteristic curve of the exposure sensitivity, (ii) at least one parameter for adjusting the position of the segments of the characteristic curve of the exposure sensitivity, (iii) at least one parameter for adjusting the size of the segments of the characteristic curve of the exposure sensitivity, and (iv) at least one parameter for adjusting the at least one function.

33. (Canceled).

34. (Previously Presented) The computer readable medium of claim 28, wherein the characteristic curve of the exposure sensitivity of the at least one pixel of the at least one image sensor is adjusted as a function of image signals from at least two image sensors, including at least one stereo camera.